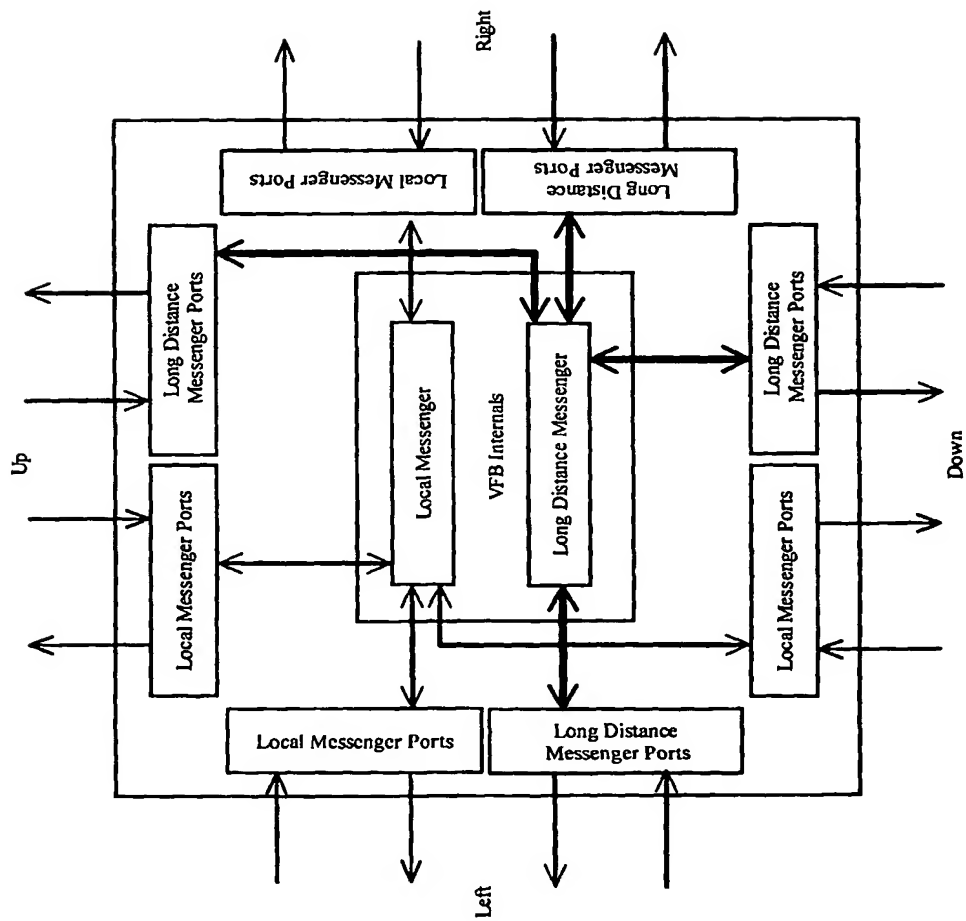Figure 1, Messenger Interconnected Processor Array
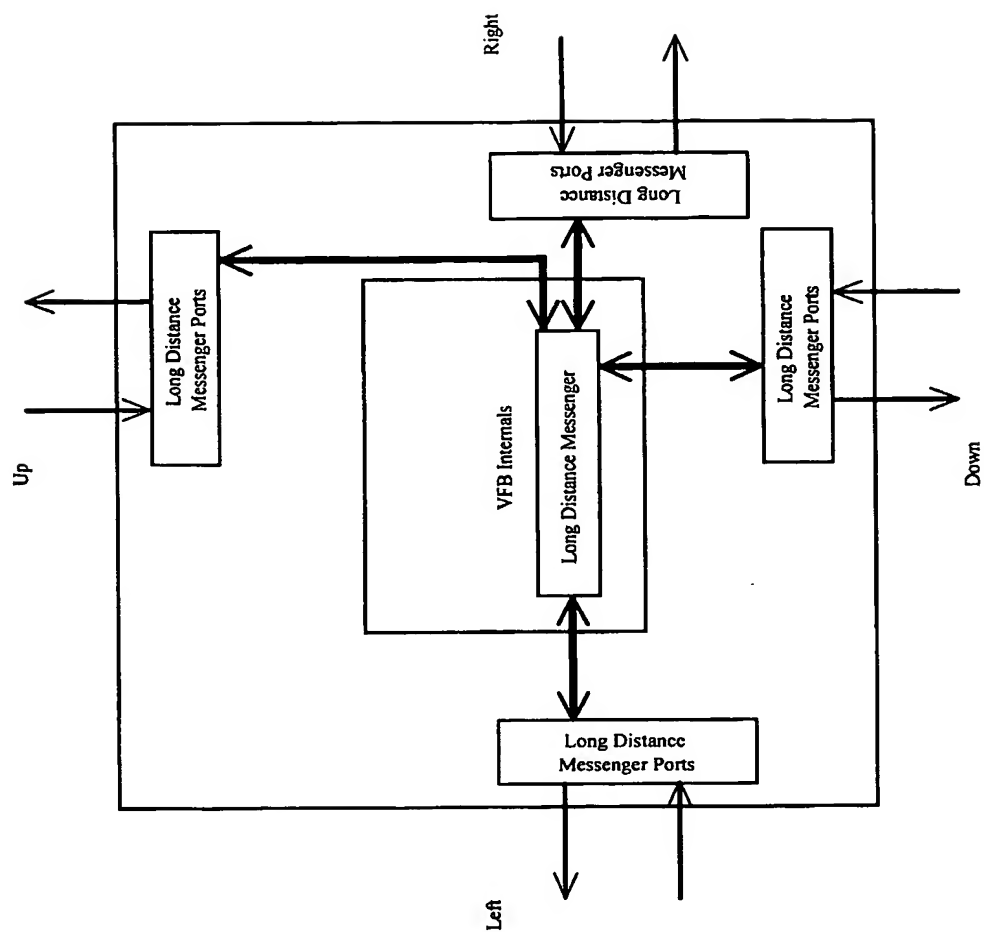
Figure 2, Individual VFB

Figure 2A, Individual VFB
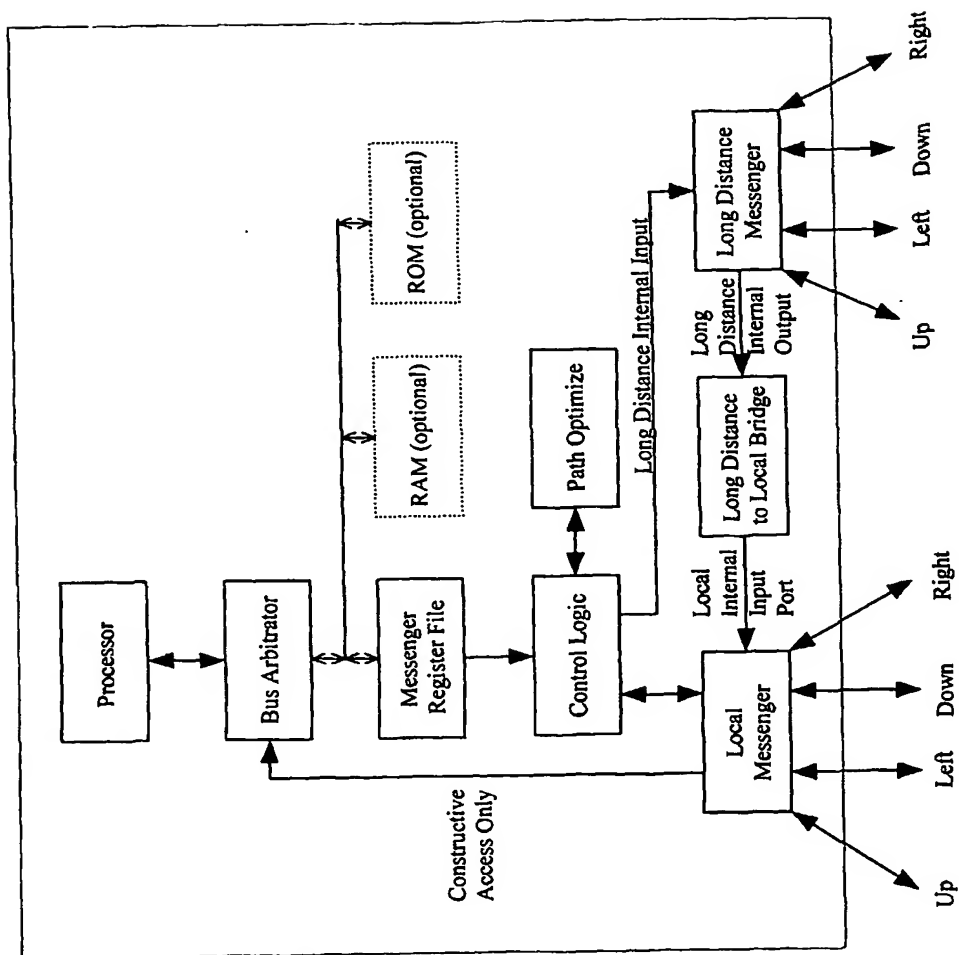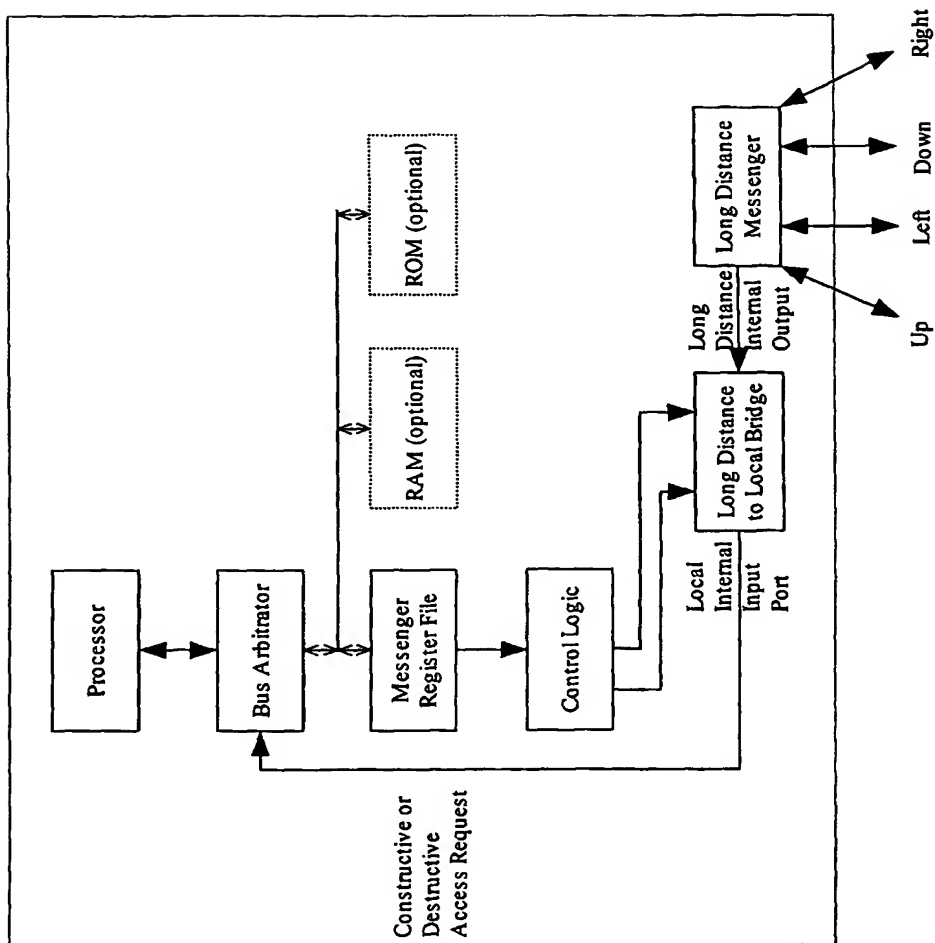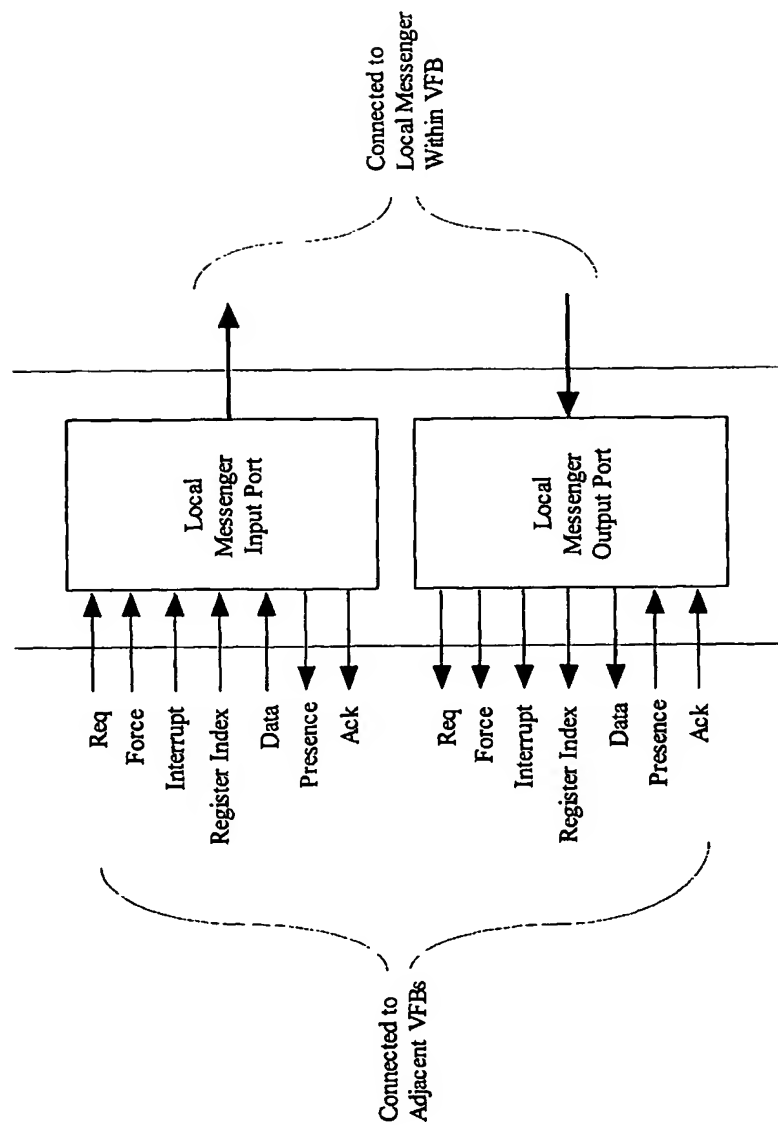
Figure 3, VFB Internals

Figure 3A, VFB Internals

Figure 4, Local Messenger Port

To Control Logic

To Bus Arbitrator

Local Messenger Prioritize, Source Selector and Control Logic

Local Internal Input From Long Distance to Local Bridge

Right side Local Messenger Input Port

Down side Local Messenger Input Port

Left side Local Messenger Input Port
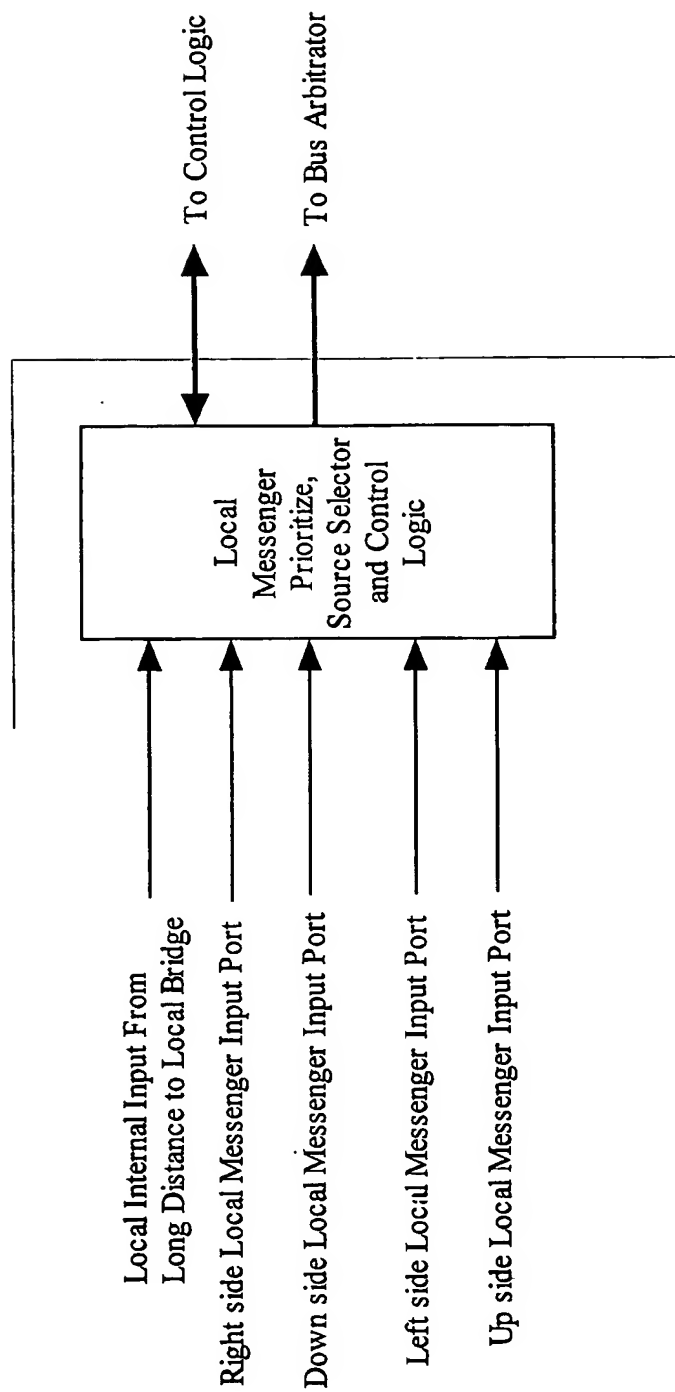
Up side Local Messenger Input Port
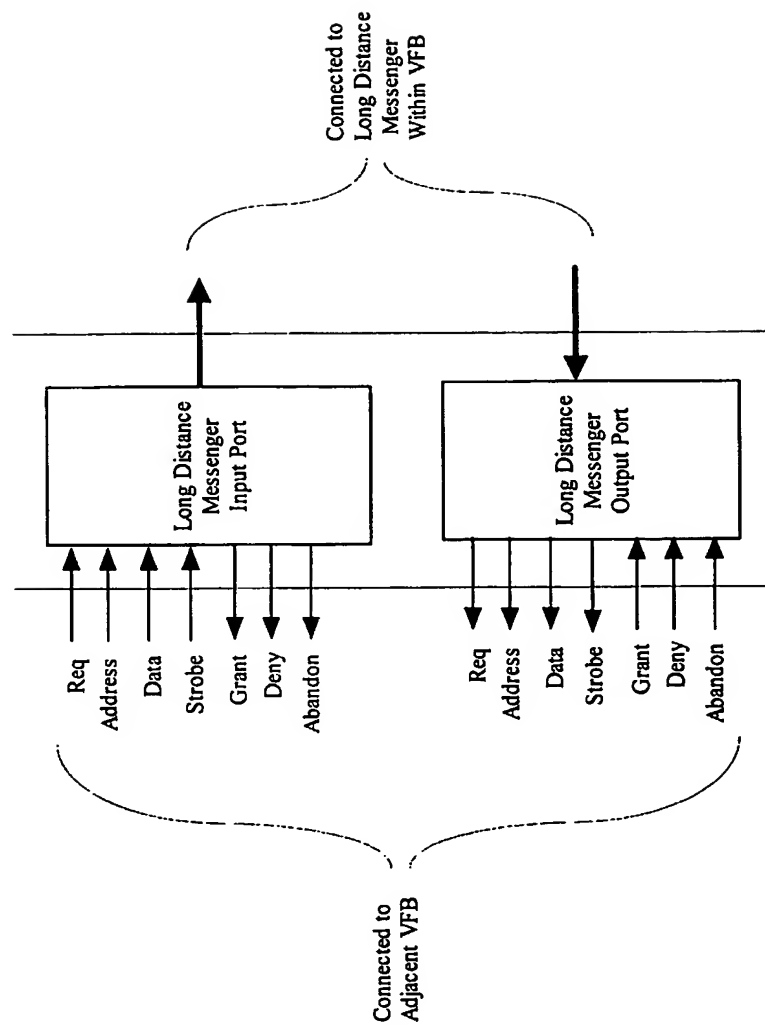
Figure 5, Local Messenger
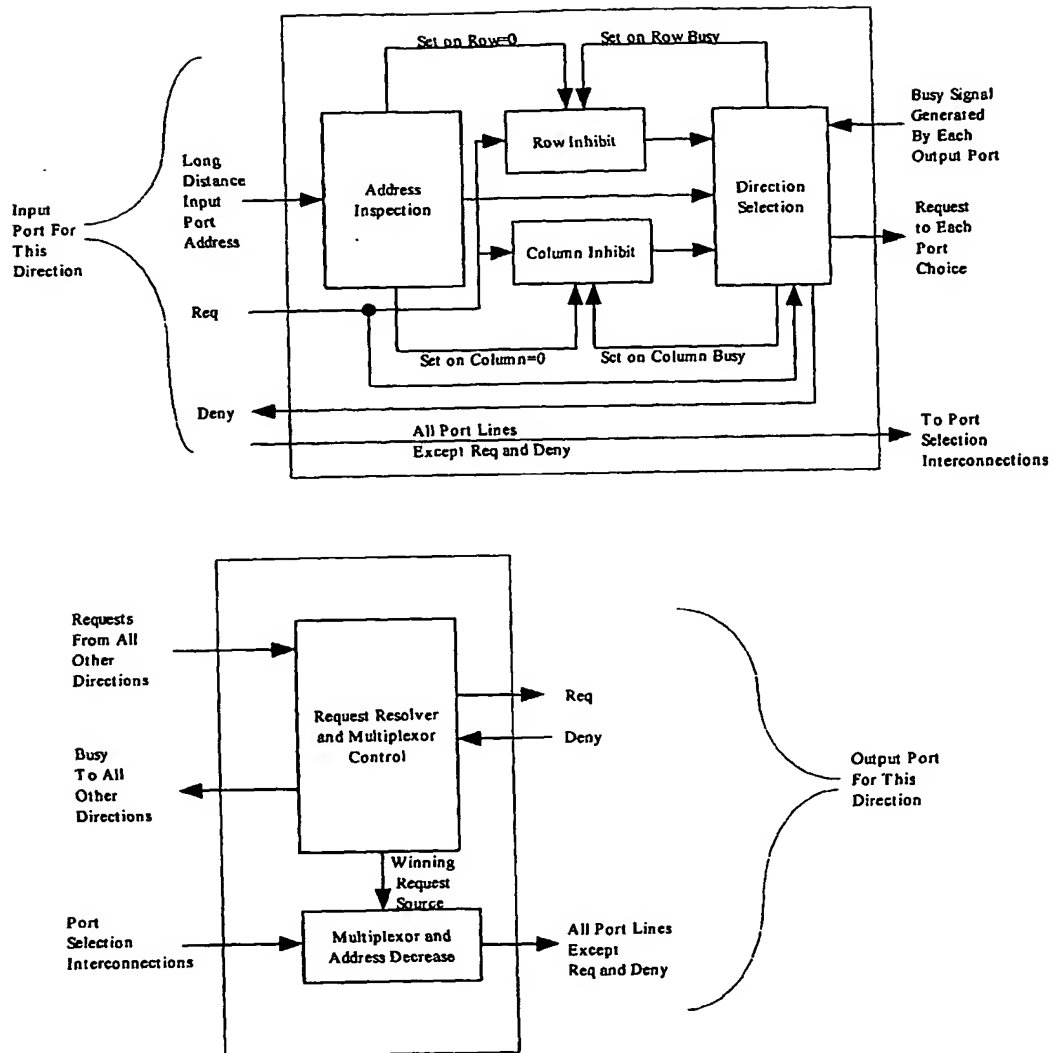
Figure 6, Long Distance Messenger Port

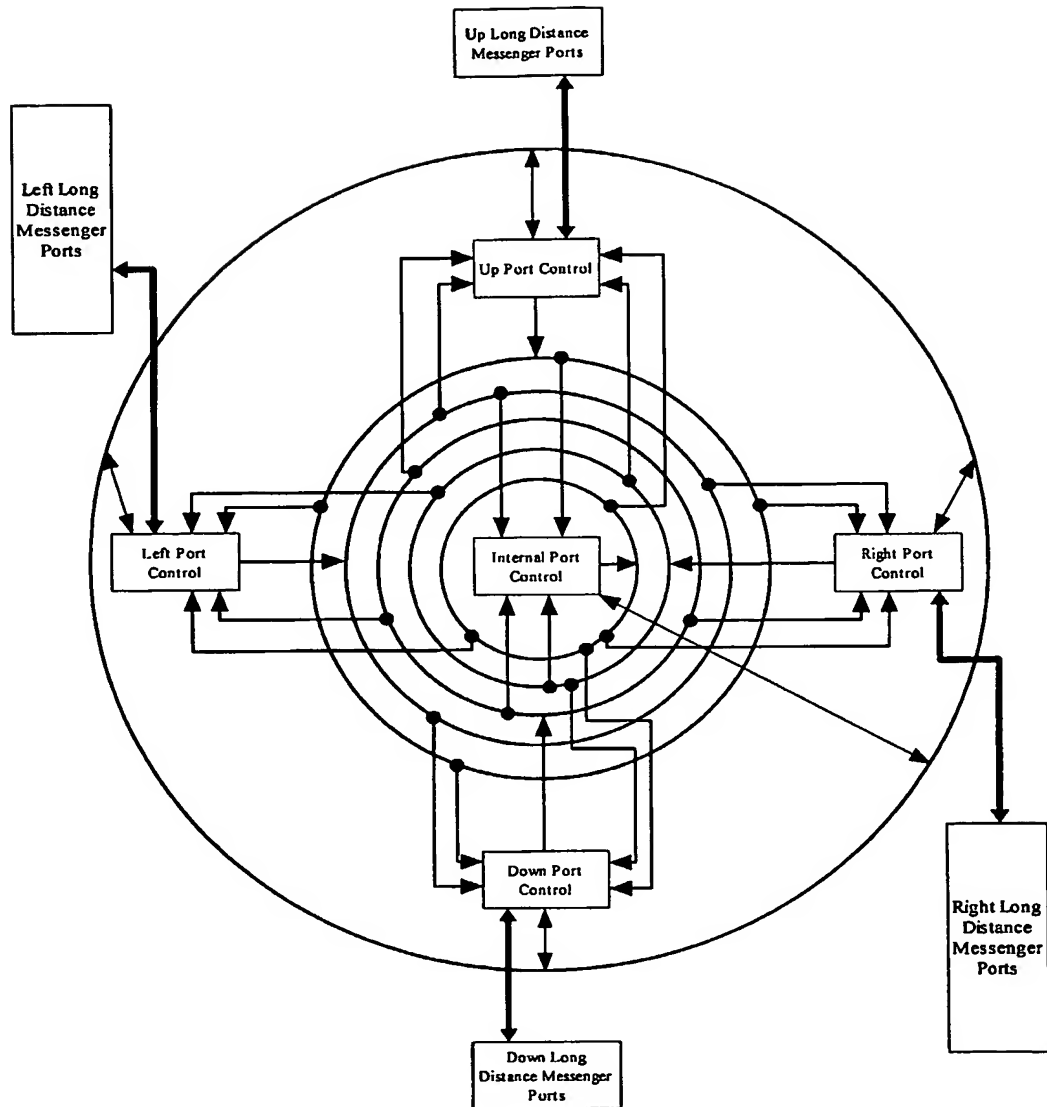Figure 7, Long Distance Messenger Port Control Logic
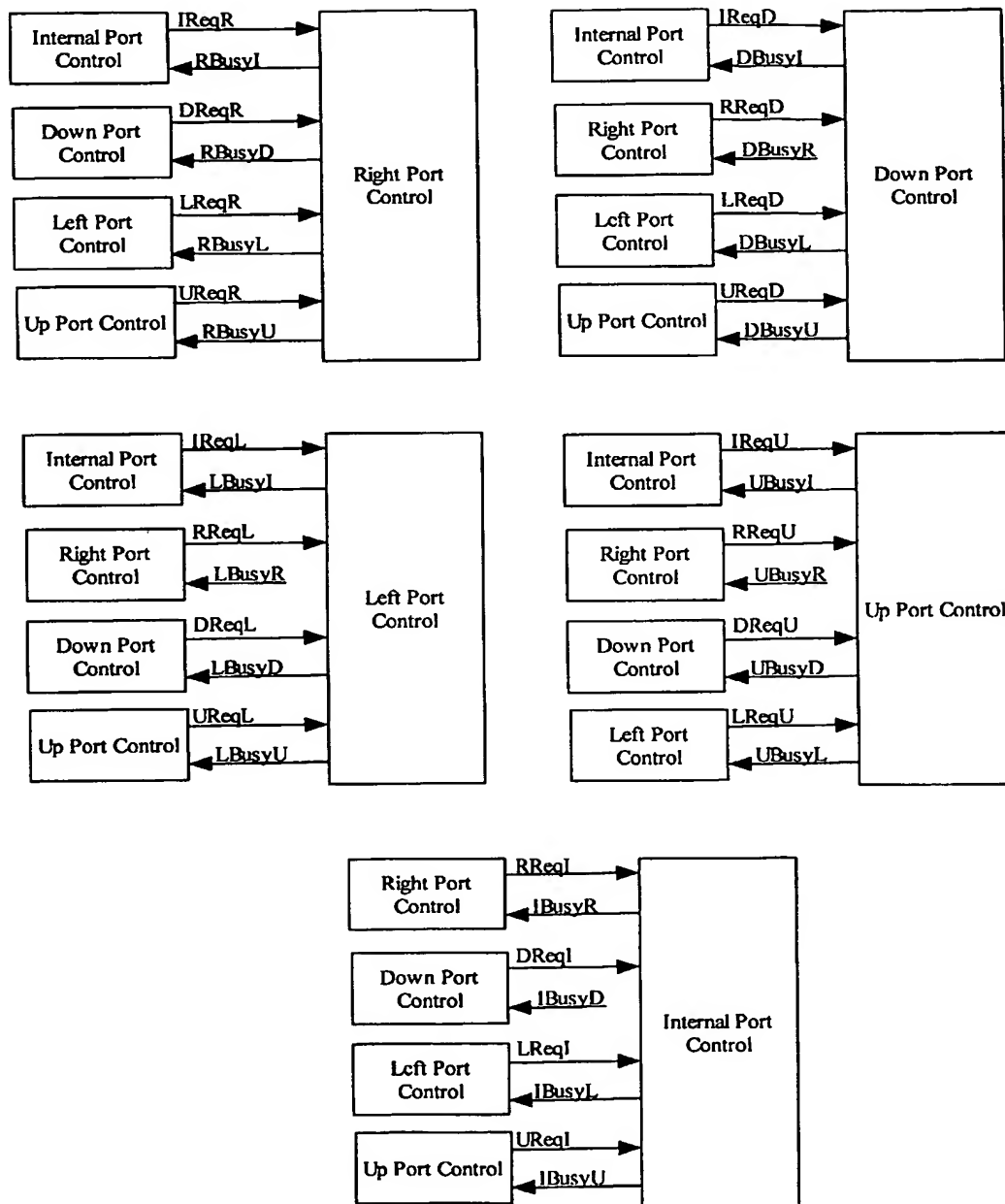
Figure 8, Long Distance Messenger

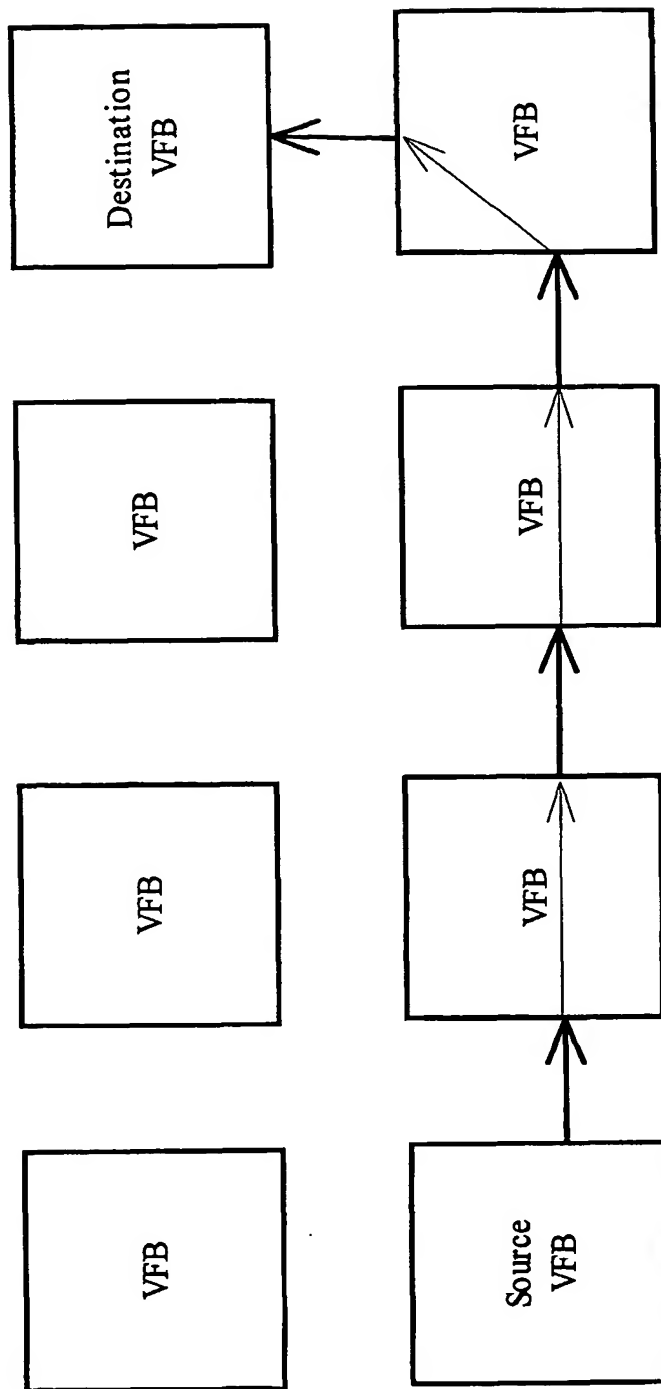Figure 9, Request and Busy Information Shared Among Long Distance Port Controls

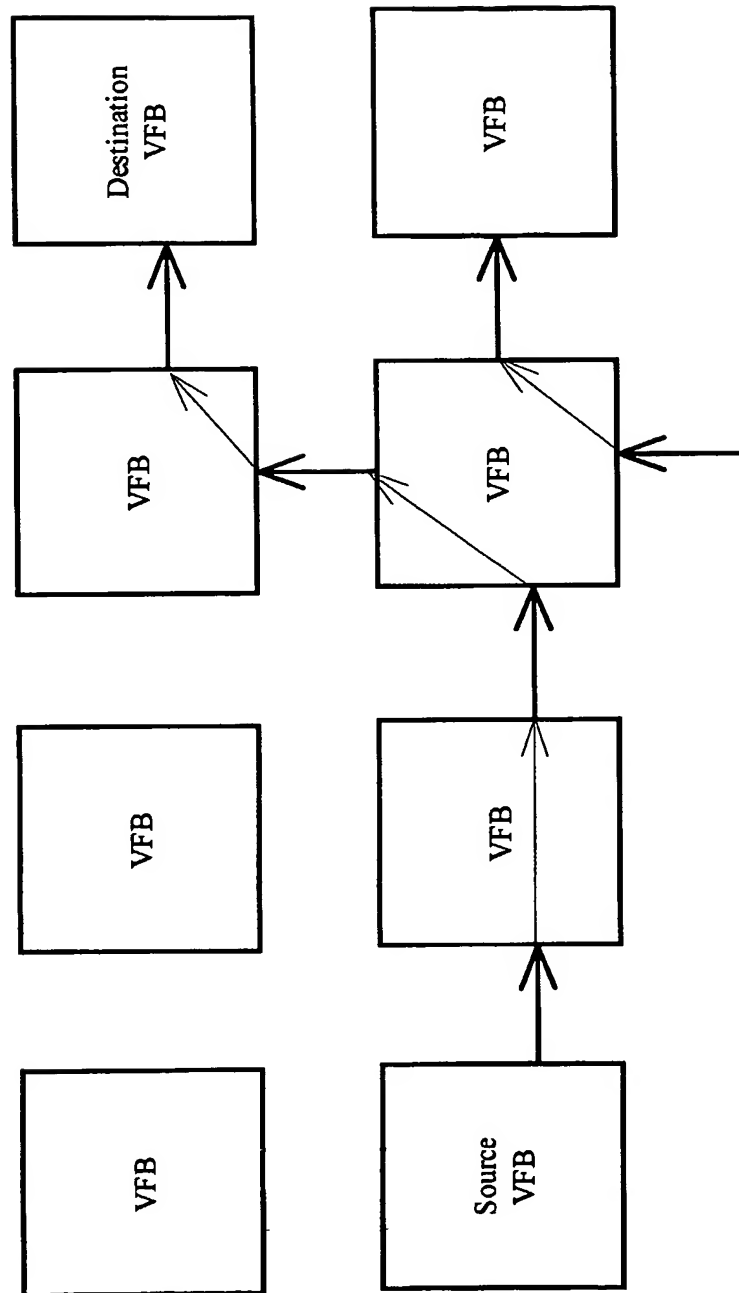Figure 10, A Long Distance Message Connection, No Path Contention

Figure 11, A Long Distance Message Connection, Path Contention Without Deny
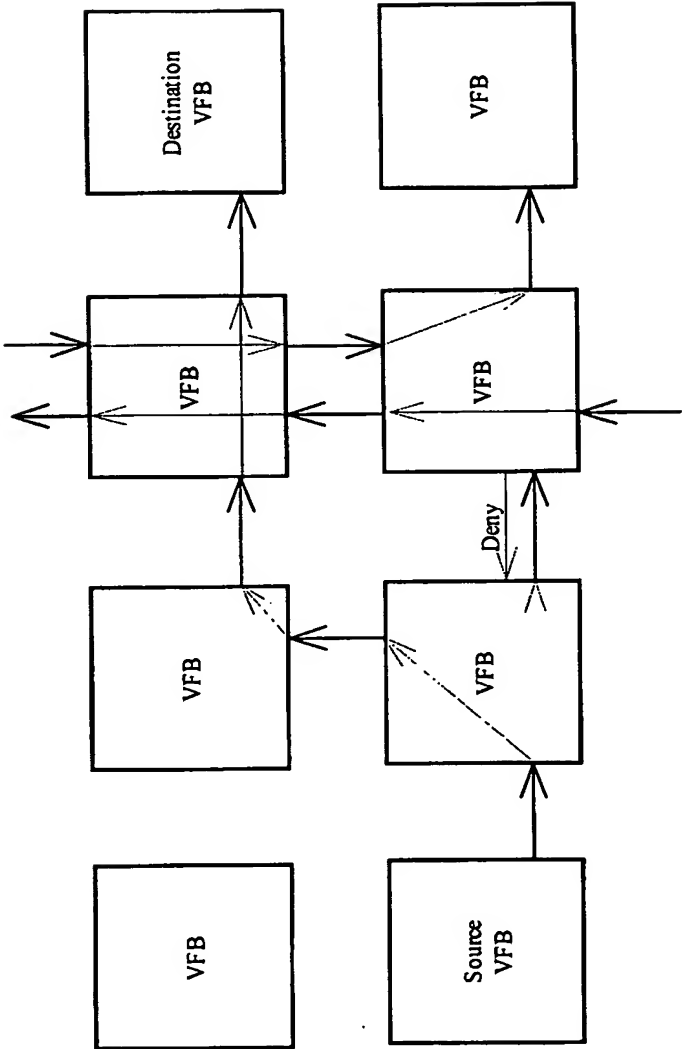
Figure 12, A Long Distance Message Connection, Path Contention With Deny
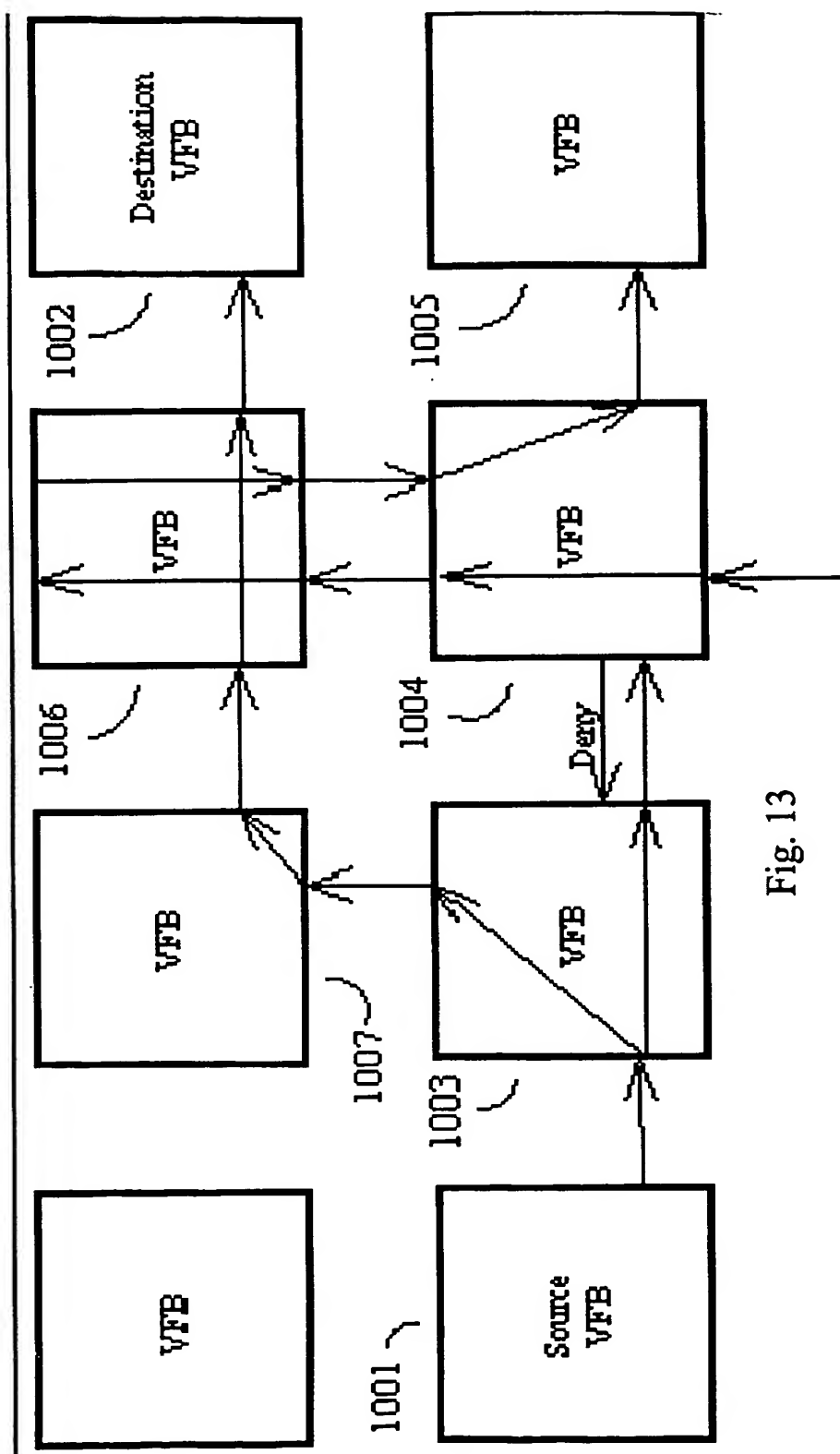
Fig. 13

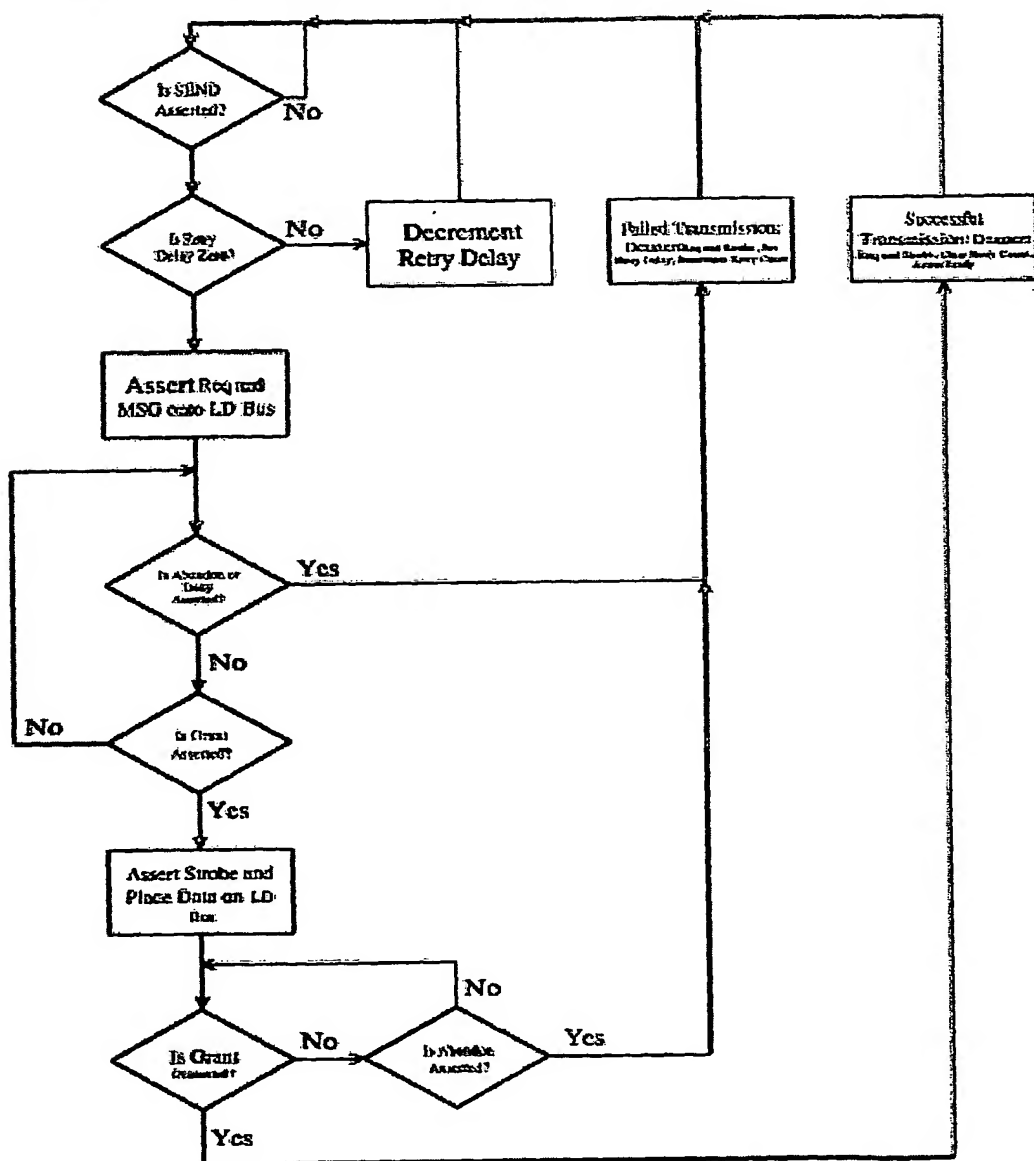Fig. 14 Bridge Send Operation (Single Port, Optimistic Send)

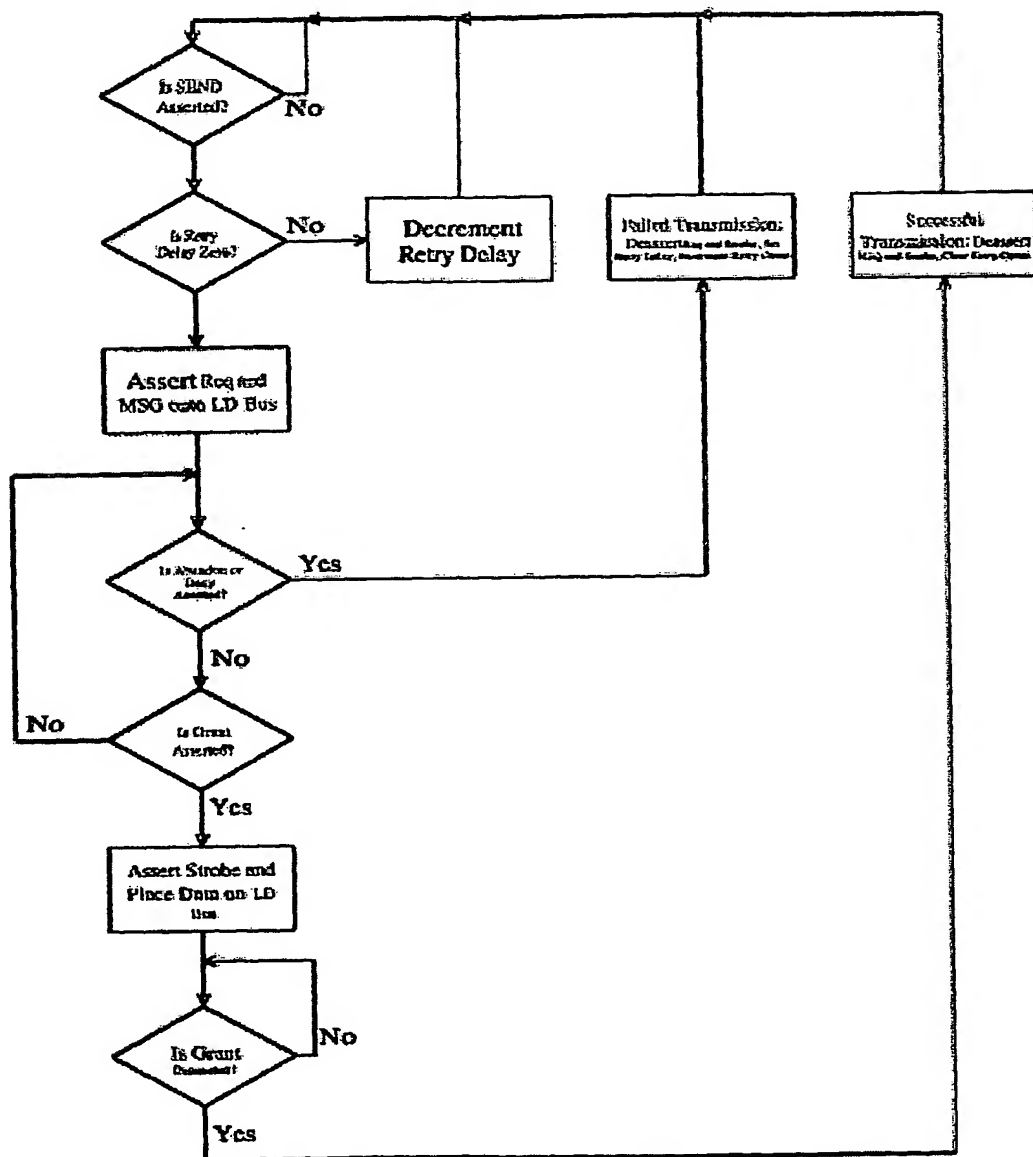Fig.15   Bridge Send Operation (Single Port, Pessimistic Send)

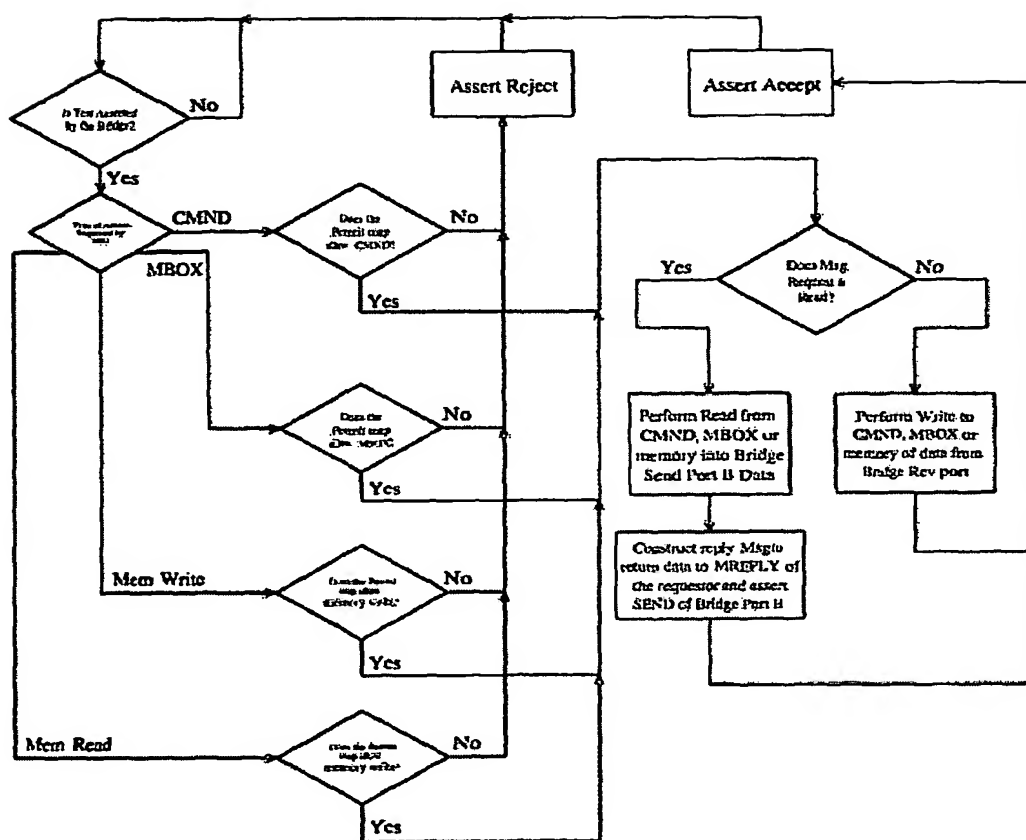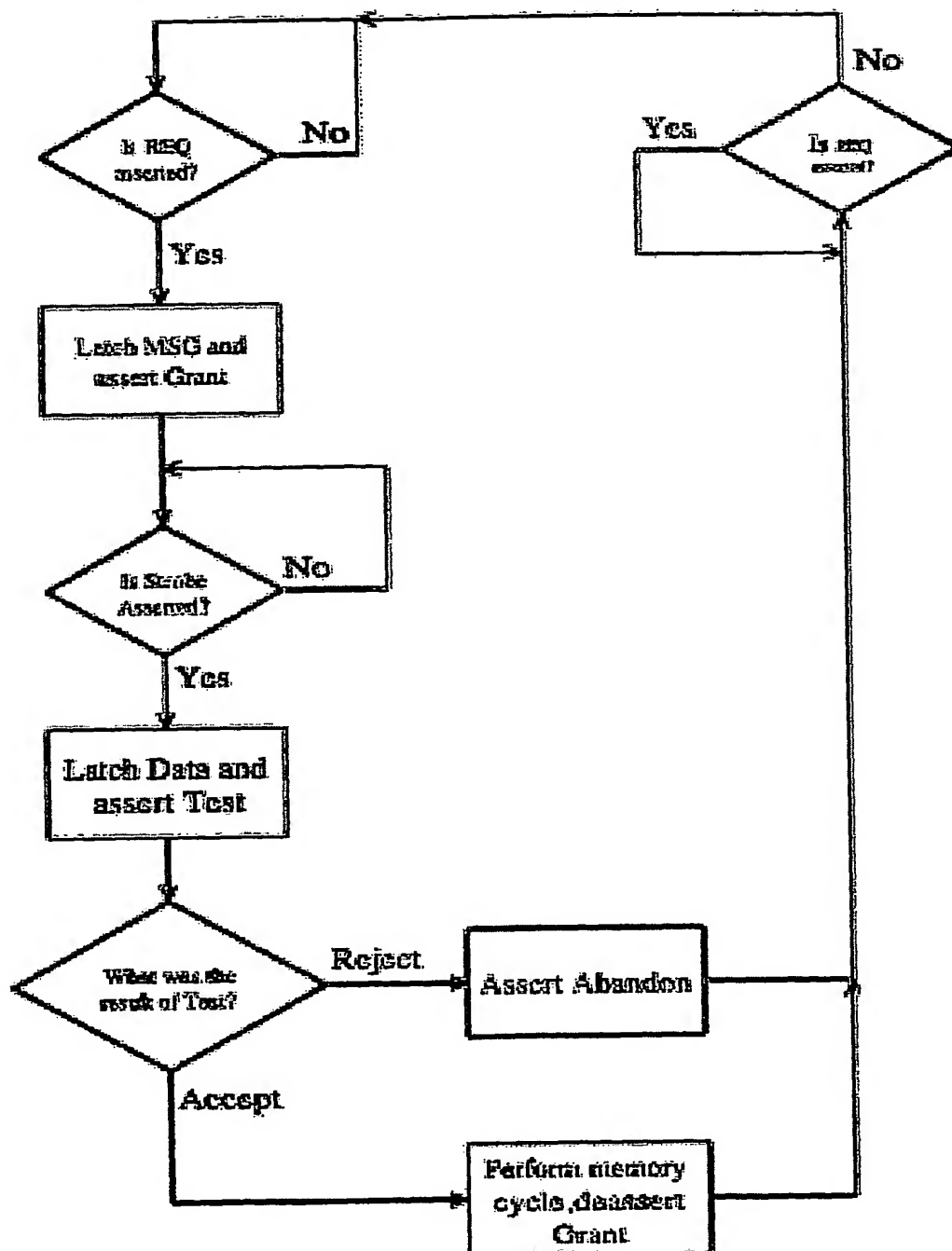Fig. 16   Permissions Test (Dual Send Port Bridge)

Fig. 17   Bridge Receive (Optimistic)

Fig. 18   Bridge Receive (Pessimistic)